

BEFORE THE
THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

Investigation by the Department to)	
Establish Permanent Prices for Bell Atlantic's)	D.T.E. 98-15, Phase II
Unbundled Network Elements)	

REBUTTAL TESTIMONY OF DR. AUGUST H. ANKUM
ON BEHALF OF MCI TELECOMMUNICATIONS CORPORATION

1 Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS ADDRESS.

2 A. My name is Dr. August H. Ankum. I am an economist and consultant, specializing in
3 telecommunications. My business address is 1350 North Wells, Suite C501, Chicago, IL
4 60610.

5 Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS PROCEEDING?

6 A. Yes, On August 3, 1998 I filed direct testimony in this proceeding on behalf of MCI
7 Telecommunications Corporation ("MCI").

8 Q. WHAT IS TH PURPOSE OF YOUR TESTIMONY?

9 A. The purpose of my testimony is to respond to some of the issues raised in the direct
10 testimonies of Bell Atlantic of Massachusetts ("BA") and AT&T.

1 Q. PLEASE SUMMARIZE YOUR FINDINGS AND STATE YOUR RECOMMENDATIONS.

2 A. My recommendations are the following:

3 -- The Department should review BA's most recent vendor contracts. These contracts
4 contain critical information not previously evaluated.

5 -- BA should be ordered to include the appropriate vendor discounts in its switch related
6 cost studies. Switching costs should be based on a weighted average of discounts
7 received for growth lines and the significantly higher discounts received for newly
8 installed switches.

9 -- BA should be ordered to offer unbundled local switching on a flat-rated basis to better
10 reflect that switching costs are *not usage sensitive* but purchased from vendors on a
11 *per line basis*.

12 -- As argued in my direct testimony, BA's interim cost studies were predicated on the
13 assumption that BA would combine network elements for dependent competitors.
14 As such the interim studies *include the costs for combining* network elements.
15 Whether or not BA will be required to combine network elements for competitive
16 local exchange carriers ("CLECs"), these costs of combining elements should now be
17 separately identified and extricated from the interim cost studies in *equal measure*.

18
19 Q. PLEASE DISCUSS THE IMPORTANCE OF BA'S VENDOR CONTRACTS IN
20 CORRECTING BA'S INTERIM STUDIES.

21 A. The importance of reviewing BA's vendor contracts is at least three fold:

22 1. To ascertain whether BA has applied the appropriate vendor discounts;

23 2. To determine whether BA has proposed a rate structure for switched services that is
24 consistent with the manner in which costs are incurred;

25 3. To determine whether the costs of combining network elements is already included
26 in the vendor charges and thus are already included in BA's cost studies.

1 In what follows, I will discuss each of these reasons in more detail.

2 **BA'S TELRIC STUDIES SHOULD BE REVISED TO CONSIDER THE**
3 **SUBSTANTIALLY HIGHER VENDOR DISCOUNTS FOR SWITCH PLACEMENT**

4 Q. HAVE YOU REVIEWED THE TESTIMONY FILED ON BEHALF OF AT&T BY DR.
5 JANUSZ A. ORDOVER?

6 A. Yes. Dr. Ordover discusses economically efficient policies for opening local telephone
7 markets in Massachusetts. His discussion of the pertinent pricing and costing issues and the
8 benefits of competition are generally consistent with the principles discussed in my Direct
9 Testimony.

10 Dr. Ordover also discusses the fact that BA has not applied the appropriate switch vendor
11 discounts in its costs studies. His discussion of the vendor discounts and the discussion in my
12 Direct Testimony of the switch vendor contracts both underscore the importance of
13 reviewing BA's contracts with its vendors.

14 Q. DOES DR. ORDOVER EXPLAIN HOW BA HAS INAPPROPRIATELY APPLIED
15 ONLY THE LOWER DISCOUNTS FOR GROWTH LINES AND HAS IGNORED THE
16 SUBSTANTIALLY LARGER DISCOUNTS BA RECEIVES FOR NEWLY INSTALLED

1 SWITCHES?

2 A. Yes. On page 29 of his testimony, Dr. Ordoover states: "In prior proceedings Bell Atlantic has
3 simply applied the relatively shallow discount it has obtained for add-on equipment, and has
4 ignored the much steeper discounts that it can get from manufacturers when it purchases new
5 switch equipment." Dr. Ordoover then goes on to explain why this is inappropriate.

6 Q. DO VENDOR CONTRACTS TYPICALLY CONTAIN A BIFURCATED DISCOUNT
7 STRUCTURE?

8 A. Yes. Although switches are complicated products capable of performing many functions, they
9 are purchased on a *per line served* basis.¹ For example, if the phone company, *at cutover*, will
10 serve 50,000 lines off a newly installed switch with the capacity to serve 100,000 lines, the
11 phone company will be charged for only 50,000 lines. When the number of lines served off
12 this switch begins to grow, however, the phone company will incur additional charges for any
13 *growth lines*, again, on a per line basis. For example, if over the course of a year, the
14 company grows the switch by an additional 10,000 lines, then the phone company will be
15 charged for an additional 10,000 lines.

16 Typically, the vendor discount for lines served at cutover is substantially larger than the

¹ Vendor contracts typically include a number of other charges, such as Right-to-Use fees, Revenue Ready fees, etc. These charges will typically also be assessed on a per line basis.

1 discount received for growth lines. The reason is obvious. Once a switch vendor is able to
2 sell a phone company a new switch, the phone company will continue to purchase lines from
3 this vendor as the switch (customer base) grows. Competition among switch vendors,
4 therefore, induces vendors to heavily discount the lines installed at cutover in the hope that
5 these discounts convince the ILECs to purchase their switch; any forgone profits will then be
6 recouped from future installations of growth lines. The practice is not unlike that of book
7 clubs, where a customer upon joining the club may purchase a number of books at a large
8 discount in return for the commitment to purchase a minimum number of books per year
9 thereafter at lower discounts.

10 Q. SHOULD TELRIC STUDIES REFLECT AN APPROPRIATE WEIGHING OF
11 DISCOUNTS FOR GROWTH LINES AND DISCOUNTS FOR CUTOVER LINES?

12 A. Yes. The long run economic costs of switching for the phone company should be calculated
13 as a weighted average of the heavily discounted price for cutover lines and the less discounted
14 price for growth lines. By contrast, to base switch related cost studies just on the more
15 expensive growth lines is opportunistic and inappropriate: to be sure, it would significantly
16 *overstate* the company's switching and switching related costs.

17 Q. HAS ANY STATE COMMISSION RECOGNIZED THE NEED TO CALCULATE THE
18 TELRIC OF SWITCHING USING A WEIGHTED AVERAGE TO REFLECT THE

1 BIFURCATED DISCOUNT STRUCTURE IN SWITCH VENDOR CONTRACTS?

2 A. Yes. In a recently completed universal service proceeding, the Illinois Commerce
3 Commission ("ICC") found that Ameritech Illinois had not used the appropriate vendor
4 discounts. To correct the error, Ameritech was ordered to submit to the ICC new studies
5 based on the bifurcated discount structure found in the switch vendor contracts. (These
6 studies will then be forwarded to the FCC for universal service cost studies.) Specifically, the
7 ICC found:

8 With respect to switch vendor prices, the parties do not appear to oppose
9 Ameritech's proposal that updated switch vendor cost inputs will require a
10 *melding of costs* which should first be reviewed by the Commission in the
11 TELRIC proceeding. Once that review is completed, we direct Ameritech to
12 update its FLEC studies and submit the updated information to the
13 Commission so that the Commission can forward it at the appropriate time to
14 the FCC.² (Emphasis added.)

15 Q. DID AMERITECH'S ECONOMIST AGREE THAT TELRIC STUDIES SHOULD BE
16 BASED ON A BLEND, A WEIGHING OF HIGHLY DISCOUNTED CUTOVER LINES
17 AND LESS DISCOUNTED GROWTH LINES?

18 A. Yes. In support of its switching cost studies, an economist testifying on behalf of Ameritech
19 Illinois stated the following in her testimony:

20 The [ICC's] Order in this proceeding is based upon the TELRIC concept.
21 TELRIC is an average incremental cost for provision of all units of the
22 element; it is not the cost of the marginal unit. Hence, TELRIC is a meld of

19. ² Illinois Commerce Commission Order, ICC Docket No. 97-0515. May 6, 1998. Page

1 the *growth* and *cutover* prices.³ (Emphasis added.)

2 **SINCE SWITCH COSTS ARE NOT USAGE SENSITIVE, BELL ATLANTIC SHOULD**
3 **BE ORDERED TO OFFER UNBUNDLED LOCAL SWITCHING ON A NON-USAGE**
4 **SENSITIVE BASIS**

5 Q. DOES THE LANGUAGE OF THE TELECOMMUNICATION ACT OF 1996 STATE
6 THAT "LOCAL SWITCHING" SHOULD BE "UNBUNDLED FROM TRANSPORT,
7 LOCAL LOOP TRANSMISSION, OR OTHER SERVICES"?

8 A. Yes. Section 271(c)(2)(B) of the Act of 1996 states the following:

9 *COMPETITIVE CHECKLIST. -- Access or interconnection provided or*
10 *generally offered by a Bell operating company to other*
11 *telecommunications carriers meets the requirements of this subparagraph*
12 *if such access and interconnection includes each of the following:*

13 ...

14 *(vi) Local switching unbundled from transport, local loop transmission,*
15 *or other services.*

16 Q. DOES BA CURRENTLY PROPOSE TO CHARGE CLECS FOR LOCAL SWITCHING
17 ON A PER MINUTE OF USE BASIS?

18 A. Yes. Under the interim rate structure, BA will asses CLECs for unbundled local switching
19 usage charges on a per minute of use ("MOU") basis.

³ Testimony of Dr. Aron on behalf of Ameritech Illinois, ICC Docket Nos. 96-0486/96-0569 Consol. Ex. 6.3. Page 10. Filed March 24, 1998.

1 Q. DO ILECS THAT OWN AND OPERATE THE SWITCHING FACILITIES GENERALLY
2 INCUR SWITCHING COSTS ON A PER MINUTE OF USE BASIS, AS SUGGESTED
3 BY BA'S RATE STRUCTURE?

4 A. No. To the best of my knowledge, no ILEC purchases switching facilities from its vendors
5 on a per MOU basis. Instead, as previously discussed, ILECs typically purchase switching
6 on a per line basis.

7 Q. DOES THIS MEAN THAT FOR PURPOSES OF CONSTRUCTING A SWITCH COST
8 STUDY THE NUMBER OF LINES SERVED AND NOT USAGE IS THE MOST
9 IMPORTANT COST DRIVER?

10 A. Yes. As noted, ILECs order switch capacity and incur switch costs on a per line basis.
11 Clearly, the main cost driver in switch cost studies, therefore, should be the number of lines
12 served.

13 By contrast, since ILECS do not incur additional costs when the switch is being used, usage,
14 as a matter of economic principle, should *not* be a cost driver in switch cost studies.
15

16 Q. IS IT ECONOMICALLY MORE EFFICIENT IF COSTS ARE RECOVERED
17 CONSISTENT WITH HOW COSTS ARE INCURRED?

18 A. Yes. In general, economic efficiency is enhanced if the price structure for a product or

1 service mirrors the manner in which costs are incurred. That is, cost should be recovered as
2 costs are incurred.

3 Q: WHY SHOULD COSTS BE RECOVERED AS THEY ARE INCURRED?

4 A: The reason is that prices serve to signal to all economic participants (buyers and sellers in a
5 society) the relative scarcity of products and services. As such they help to determine how
6 much society will consume of a certain product or service. This means that if prices are out-
7 of-alignment with costs, then society receives the wrong signals about relative scarcities. The
8 result is that society will either over-consume or under-consume certain products or services.
9 In any event, price distortions will lead to economic inefficiencies.

10 The distortions may be particularly harmful in competitive situations where a company sells
11 to dependent competitors, such as the ILEC selling unbundled local switching to CLECs. In
12 this situation, the pricing inefficiencies may bestow on the ILEC an anti-competitive
13 advantage over the CLECs.

14 Q. PLEASE EXPLAIN WHY BA'S PRICING PROPOSAL LEADS TO AN ANTI-
15 COMPETITIVE ADVANTAGE FOR BA.

16 A. Under BA's current price structure for unbundled local switching, CLECs are faced with
17 usage charges on a per MOU basis. This means that if the CLEC uses BA's unbundled local

1 switching to serve end-users, then it incurs costs with *every* call the CLEC's end-users make.
2 By contrast, given that switching costs are not really usage sensitive, BA itself incurs *no per*
3 *MOU cost* for switching services offered to its end-users. Thus, BA's pricing proposal has
4 created an asymmetry in which its cost structure is different from those of its dependent
5 competitors. To be sure, this asymmetry places BA at a competitive advantage when it
6 competes with CLECs that want to use BA's unbundled local switching services.

7 Q. ARE YOU AWARE OF ANY ILEC ECONOMISTS WHO AGREE WITH YOUR
8 POSITION THAT A NON-USAGE SENSITIVE, FLAT-RATED PRICES STRUCTURE
9 FOR UNBUNDLED LOCAL SWITCHING IS MORE CONSISTENT WITH THE
10 MANNER IN WHICH ILECS INCURS SUCH COSTS?

11 A. Yes. In a docket for determining the TELRIC of unbundled local switching, an economist
12 for Ameritech Illinois stated the following:

13 From a purely economic perspective, because line, trunk, and RR vendor
14 prices are assessed on a per-line basis in the vendor contracts *without a usage*
15 *sensitive component*, and because these prices include a certain amount of
16 switching capacity, it is consistent with cost-causation principles for
17 Ameritech *to provide switch ports to CLECs on a per line, rather than usage-*
18 *sensitive, basis*, as long as customers remain within the limits of the 'normal
19 usage' which is included by the vendor in the standard per-line prices.⁴
20 (Emphasis added.)

⁴ Testimony of Dr. Aron on behalf of Ameritech Illinois, ICC Docket Nos. 96-0486/96-0569 Consol. Ex. 6.3. Page 7. Filed March 24, 1998.

1 Q. IS THIS POSITION CONSISTENT WITH PRIOR DEPARTMENT DECISIONS?

2 A. Yes. A similar issue has already been resolved by this Department when it found that TCG
3 was entitled to obtain end-office integration services on a flat-rated basis, as opposed to a
4 usage sensitive basis. The Department's recognition that a flat-rated port for end office
5 termination is consistent with my position in this proceeding.

6 Q. SHOULD THE DEPARTMENT EXAMINE BA'S VENDOR CONTRACTS IN ORDER
7 TO DETERMINE WHETHER FLAT-RATED UNBUNDLED LOCAL SWITCHING IS
8 MORE APPROPRIATE?

9 A. Yes. The Department should examine BA's vendor contracts to determine whether BA
10 incurs any usage related switch costs or whether it incurs its switch costs on a per line basis
11 as other ILECs do. If BA's vendor contracts provide for the latter, then the Department
12 should order BA to offer to CLECs unbundled local switching on a flat-rated basis.

13 **VENDOR CONTRACTS SHOULD BE EXAMINED TO IDENTIFY THE COSTS OF**
14 **COMBINING NETWORK ELEMENTS**

15 Q. DO VENDOR CONTRACTS TYPICALLY CONTAIN INFORMATION REGARDING
16 THE COSTS INCURRED TO COMBINE NETWORK ELEMENTS?

17 A. Yes. In my direct testimony I discuss that, typically, vendor contracts provide that the switch
18 vendors connect jumper cables to the main distribution frame and cables to the DSX panels

1 and Cosmic frames. In other words, it is the switch vendors that combine various network
2 elements. Since BA has now raised the question of which party should be combining network
3 elements and at what costs, I have argued in my direct testimony that the Department should
4 review the vendor contracts and adjust BA's cost studies accordingly. Specifically, I made
5 the following recommendation:

6 BA's interim cost studies were predicated on the assumption that BA would combine
7 network elements for dependent competitors. As such the interim studies *includes*
8 *the costs for combining* network elements. Whether or not BA will be required to
9 combine network elements for competitive local exchange carriers ("CLECs"), these
10 costs of combining elements should now be separately identified and extricated from
11 the interim cost studies in *equal measure*.

12 **THE DEPARTMENT SHOULD REJECT BA'S RECOMMENDATION TO ADOPT THE**
13 **INTERIM COST STUDIES ON A PERMANENT BASIS**

14 Q. HAVE YOU REVIEWED BA'S TESTIMONY IN THIS PROCEEDING?

15 A. Yes. In essence, BA recommends that the Department adopt BA's interim cost studies and
16 uses them as the basis for setting permanent rates.

17 Q. DO YOU AGREE WITH BA'S RECOMMENDATIONS?

18 A. No. BA has selectively ignored the implications of the Eight Circuit's Order on its cost
19 studies. As discussed in this rebuttal testimony and in my direct testimony, BA's interim cost
20 studies predated the Eight Circuit's Order and were predicated on the assumption that BA
21 would combine network elements for CLECs. That assumption is now being tested,
22 warranting a revision of BA's interim studies.

1 Additionally, as I and other parties have demonstrated, BA's cost studies are not proper
2 TELRIC studies. For these, among other reasons, I believe that the Department should reject
3 BA's recommendation to adopt the interim cost studies on a permanent basis.

4 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

5 A. Yes. It does.